JHR 30: 1–6 (2013)
doi: 10.3897/JHR.30.4733
www.pensoft.net/journals/jhr

EDITORIAL

JOURNAL OF Hymenoptera RESEARCH
A peer-reviewed open-access journal
The International Society of Hymenopterists

The move to open access and growth: experience from Journal of Hymenoptera Research

Stefan Schmidt[1], Gavin R. Broad[2], Pavel Stoev[3], Daniel Mietchen[4], Lyubomir Penev[3]

1 *Zoologische Staatssammlung, Münchhausenstr. 21, 81247 Munich, Germany* **2** *Department of Life Sciences, Natural History Museum, Cromwell Road, London SW7 5BD, UK* **3** *Bulgarian Academy of Sciences & Pensoft Publishers, Sofia, Bulgaria* **4** *EvoMRI Communications, Zwätzengasse 10, 07743 Jena, Germany*

Corresponding author: *Stefan Schmidt* (hymenoptera@zsm.mwn.de)

Received 20 January 2013 | Accepted 21 January 2013 | Published 30 January 2013

Citation: Schmidt S, Broad GR, Stoev P, Mietchen D, Penev L (2013) The move to open access and growth: experience from Journal of Hymenoptera Research. Journal of Hymenoptera Research 30: 1–6. doi: 10.3897/JHR.30.4733

The Journal of Hymenoptera Research (JHR) is published by the International Society of Hymenopterists. It is devoted to the study of all aspects of Hymenoptera and covers a broad range of research disciplines, including biology, morphology, behaviour, ecology, genetics, systematics and taxonomy. The journal was launched in 1992 and for most of its existence was published as two issues per annual volume. In 2011, after publication of 19 volumes, the Society decided to move from restricted to open access, with Pensoft as a publisher. This move had several important consequences for the publication and dissemination of information about Hymenoptera.

The new publication model has replaced the traditional schedule of two issues per year with a more flexible one allowing publication of unlimited numbers of issues, depending only on the availability of publishable content. The unrestricted number of issues speeded up the publication process and increased the number of published pages as a whole. For instance, from 2000 to 2010 (vol. 10–19), JHR published an annual average of 306 pages (Fig. 1), while shortly after changing the publication model, the number of published pages increased to 366 in 2011 and 712 pages in 2012. Likewise, there has been growth in submissions to JHR and published articles, reaching 51 and 38 articles, respectively, in 2012. The rejection rate, at about 20%, remained about the same, with 10 rejected manuscripts in 2011 and 11 rejections in 2012.

Copyright *Stefan Schmidt et al.* This is an open access article distributed under the terms of the Creative Commons Attribution License 3.0 (CC-BY), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

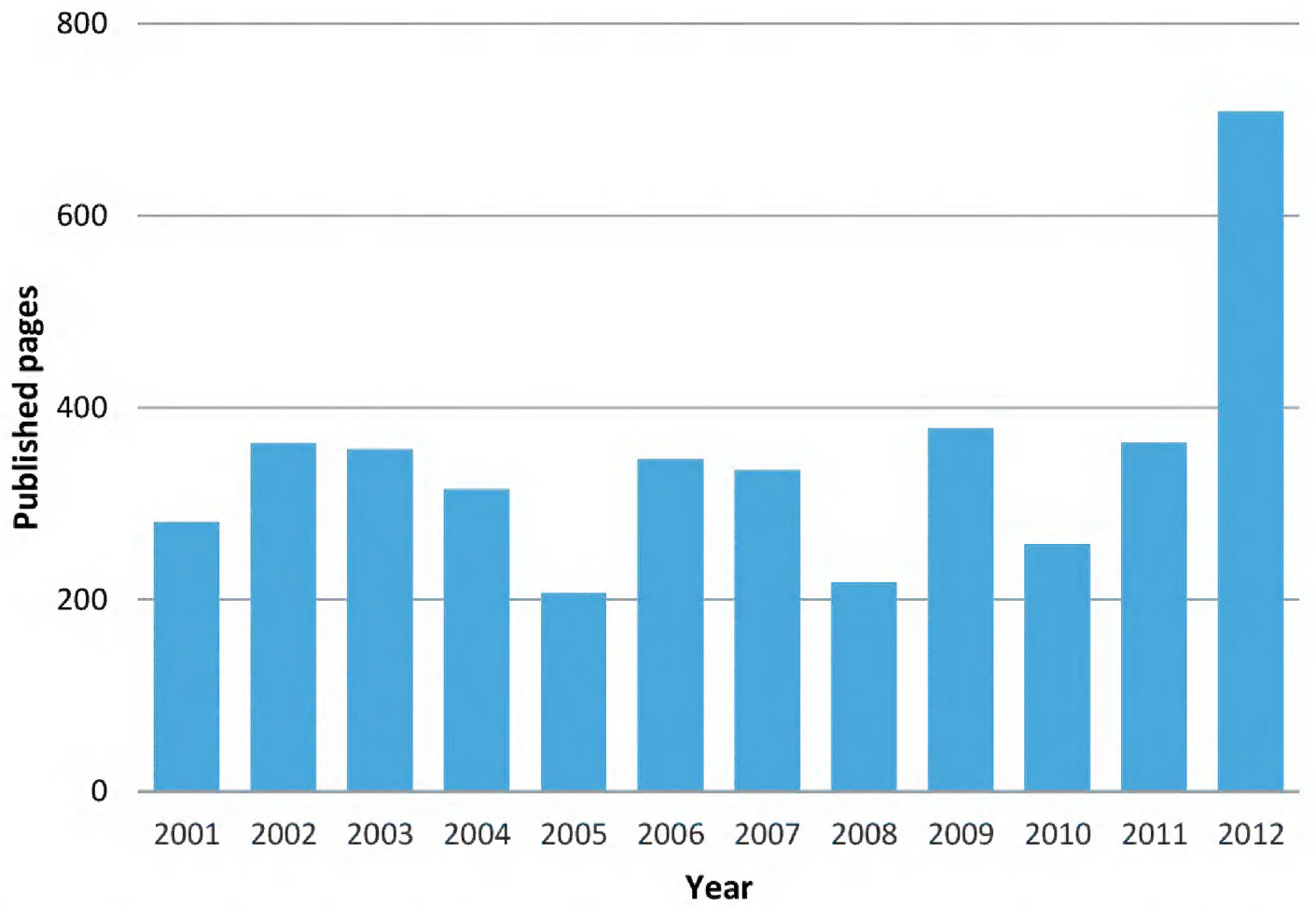

Figure 1. Annual number of published pages of Journal of Hymenoptera Research. The most recent two volumes (2011 and 2012) were published open access.

Apart from a significant increase in the volume of published content, the move to open access was accompanied by several other changes. Most importantly, published information is immediately disseminated, through XML markup, to global aggregators and scientific databases, including Encyclopedia of Life (EOL), the Global Biodiversity Information Facility (GBIF), Plazi, and Species-ID (see, e.g., Penev et al. 2010, 2011). Similarly, publication records are distributed to scientific databases, indices and search engines, such as Zoological Record, Web of Science, Google Scholar, CAB Abstracts, DOAJ Content and others. The publisher provides an alert service through email, RSS, and social networks, including Facebook, Twitter and Mendeley to inform readers of the publication of new issues.

JHR and the International Society of Hymenopterists have benefited also from Pensoft's dissemination services. Since May 2011, Pensoft's PR team has been supporting authors actively in "translating" the technical texts into more popular language. Although still not a routine practice, the press release by Shaw et al. (2011), posted at Eurekalert, received around 800 page views during a short time. The accelerated dissemination workflow led to a increase of the visits to the JHR website. While web traffic statistics are not available from before the switch to open access, the number of page loads rose from about 25,000 in 2011 to more than 40,000 in 2012. During the same period, the number of unique visitors increased from ca. 8,200 to almost 14,350 (Fig. 2), indicating an improved visibility of the journal. The list of most viewed articles is a quite accurate representation of the topics and taxa that qualify as the most prominent research topics of articles published in JHR.

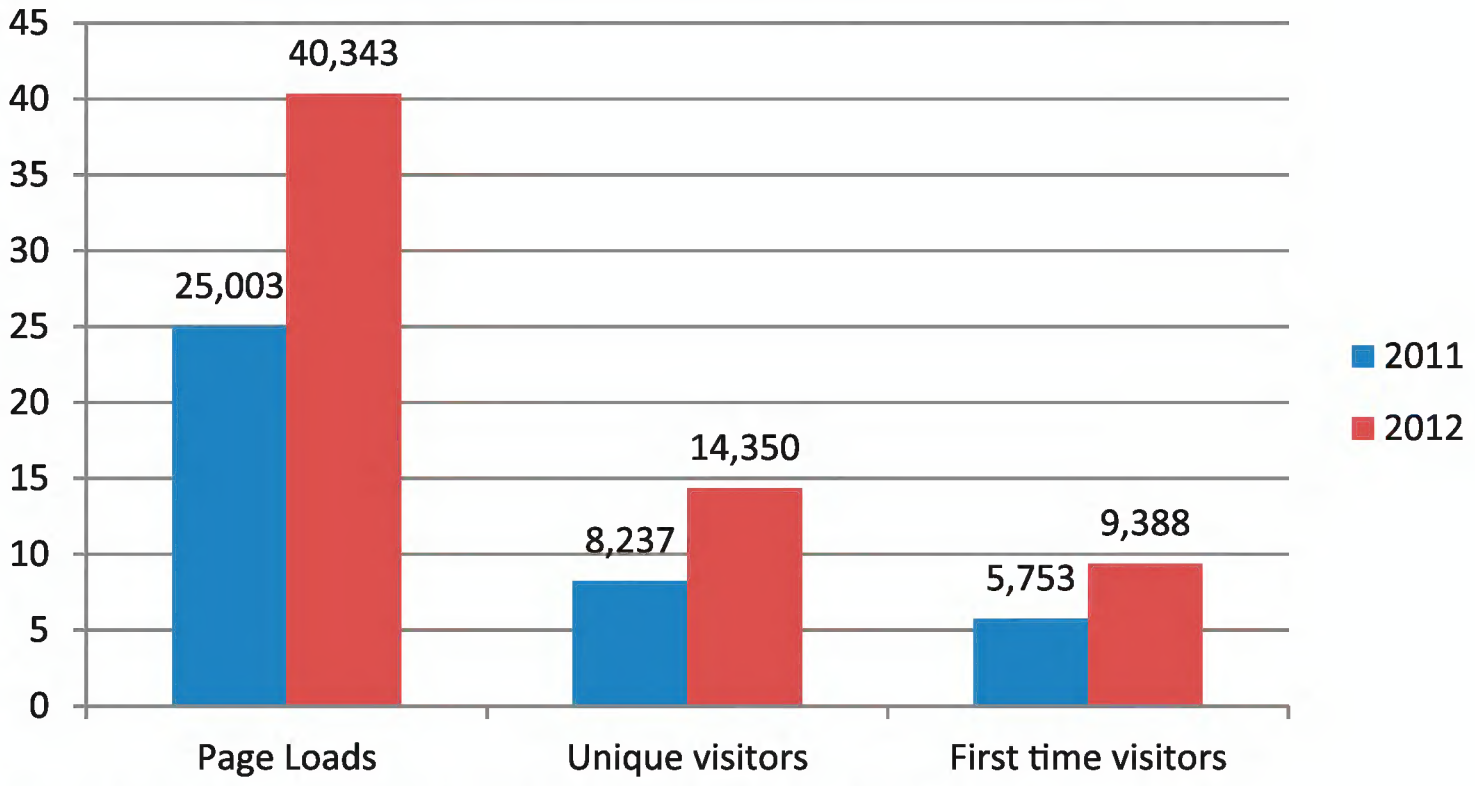

Figure 2. JHR Statcounter statistics, showing the number of visits to the website.

Two groups of Hymenoptera stand out as receiving considerable attention in terms of published articles: Braconidae and aculeate wasps. In 2011 and 2012, a total of a dozen articles were published about Braconidae and they make up for over half of the top ten most viewed articles (Table 1). The majority of the most accessed articles comprise revisionary studies, including the large-scale revision of the genus *Quartinia* in Southern Africa (Gess 2011a, b; 2012a, b), with part IV being the most viewed article (Table 1). Eleven, or 19%, of all published articles in 2011/2012 had behavioural ecology as their main subject, with a prevalence of articles concerning aculeate wasps (Alcock 2011, Buys 2012, Nalepa 2012, Dalmazzo and Roig Alsina 2012, Barthelemy and Pitts 2012, Sarzetti et al. 2012, Wcislo et al. 2012). Although there is a predominance of articles that have systematics, phylogeny, and ecology as their prime subjects, there have been several articles dealing with important, more general subjects. Gates and Buffington (2011) describe innovative techniques for processing the increasing number of parasitoid specimens that are obtained through biodiversity studies. The tools developed and provided by Seltmann et al. (2012) in their article describing the Hymenoptera Anatomy Ontology represent an important milestone for the future of sustainable digital publication, allowing authors to reference their hymenopteran anatomical terminology to well-defined and illustrated anatomical concepts.

Authors benefit from the move to the Pensoft online editorial platform in that they can expect a faster turnaround time for their manuscripts, usually ranging from one to a few months from submission to publication. The open access model guarantees a better dissemination and visibility of their articles through the simple but important fact of accessibility, augmented by tailored use of cutting-edge Web 2.0 technologies. Manuscripts are submitted through a highly automated online editorial management system that provides authors and editors with a more streamlined editorial pathway. The move to electronic publication also means that there is no page limit for manuscript length,

Table 1. The top ten most viewed articles of JHR published in 2011 and 2012 (according to the JHR website counter, accessed on 29 January 2013).

Rank	Article	Author (Year)	Views
1	The genus *Quartinia* Ed. André, 1884 (Hymenoptera, Vespidae, Masarinae) in Southern Africa. Part IV.	Gess (2011a)	2,706
2	A review of New World *Eurytenes* s. str. (Hymenoptera, Braconidae, Opiinae)	Walker and Wharton (2011)	2,567
3	Sting microsculpture in the digger wasp *Bembix rostrata* (Hymenoptera, Crabronidae)	Matushkina (2011)	2,563
4	Characteristics of the cocoon and natural history of the gregarious *Meteorus restionis* sp. n. (Hymenoptera, Braconidae, Meteorinae) from Costa Rica	Barrantes et al. (2011)	2,282
5	Two new brachypterous species of *Heterospilus* Haliday (Hymenoptera, Braconidae, Doryctinae) from the Nearctic region	Kula (2011)	2,265
6	A revision of Thai Agathidinae (Hymenoptera, Braconidae), with descriptions of six new species.	Stoelb and Sharkey (2011)	2,251
7	Two new synonyms in Oriental Crabronidae (Hymenoptera)	Pulawski (2011)	2,095
8	Discovery of *Rodrigama* Gauld in the Old World, with description of two new species (Hymenoptera, Ichneumonidae, Poemeniinae)	Matsumoto and Broad (2011)	2,068
9	A hymenopterists' guide to the Hymenoptera Anatomy Ontology: utility, clarification, and future directions	Seltmann et al. (2012)	2,052
10	Unusual host carrying by a parasitoid wasp (Braconidae, Braconinae, Pycnobraconoides)	Quicke and Marshall (2011)	2,014

although for large revisionary works, checklists, catalogues, monographs, etc., there is the option of separate publication as a supplement. Nor is there a limit (or extra charge) for colour illustrations or the integration with multimedia (e.g. as in Wcislo et al. 2012), and authors are encouraged to submit non-printable matter like movie clips, sound recordings, or 3D animations. At the same time, we continue to produce a high resolution full-color printed version with a subscription option for individuals and institutions, and Society members benefit from a discount on printed copies and open access fees.

The technological development of JHR continues and the next step will not delay too long. JHR will be transferred in 2013 to the brand new Pensoft Journal System (PJS 2.0), a novel editorial management system that will greatly facilitate the editorial process for our authors, reviewers and editors through improving usability and navigation. PJS 2.0 will offer a number of additional tools, that can be used optionally by the JHR authors, such as community and public peer review, and an online, collaborative, article-authoring tool (Pensoft Writing Tool, PWT) that provides a large set of predefined, but flexible, templates of different types of article. In the PWT environment, authors can work collaboratively on their manuscripts online and may also invite external contributors, such as mentors, potential reviewers, linguistic and copy editors, colleagues, etc., who may watch and comment on the text during the manuscript preparation. The PWT will also facilitate upload of occurrence data in DarwinCore, provide automated registration of new taxa in ZooBank, import of references, embed multimedia, compose plates from single images, and many other features.

References

Alcock J (2011) Hilltopping behavior by males of *Tachysphex menkei* Pulawski (Hymenoptera, Crabronidae). Journal of Hymenoptera Research 21: 65–70. doi: 10.3897/jhr.21.876

Barrantes G, Triana ET, Shaw SR, Jones GZ (2011) Characteristics of the cocoon and natural history of the gregarious *Meteorus restionis* sp. n. (Hymenoptera, Braconidae, Meteorinae) from Costa Rica. Journal of Hymenoptera Research 20: 9–21. doi: 10.3897/jhr.29.867

Barthelemy C, Pitts J (2012) Observations on the nesting behavior of two agenielline spider wasps (Hymenoptera, Pompilidae) in Hong Kong, China: *Macromerella honesta* (Smith) and an *Auplopus* species. Journal of Hymenoptera Research 28: 13–35. doi: 10.3897/jhr.28.3010

Buys SC (2012) Nesting habits, alternative nesting strategies and female territoriality of the cockroach-hunting solitary wasp *Penepodium luteipenne* (Hymenoptera: Sphecidae). Journal of Hymenoptera Research 24: 27–41. doi: 10.3897/jhr.24.1828

Dalmazzo M, Roig Alsina A (2012) Nest structure and notes on the social behavior of *Augochlora amphitrite* (Schrottky) (Hymenoptera, Halictidae). Journal of Hymenoptera Research 26: 17–29. doi: 10.3897/jhr.26.2440

Gates MW, Buffington ML (2011) Description of two techniques to increase efficiency in processing and curating minute arthropods, with special reference to parasitic Hymenoptera. Journal of Hymenoptera Research 22: 133–140. doi: 10.3897/jhr.22.2099

Gess FW (2011a) The genus *Quartinia* Ed. André, 1884 (Hymenoptera, Vespidae, Masarinae) in Southern Africa. Part IV. New and little known species with complete venation. Journal of Hymenoptera Research 21: 1–39. doi: 10.3897/JHR.21.870

Gess F (2011b) The genus *Quartinia* Ed. André, 1884 (Hymenoptera, Vespidae, Masarinae) in Southern Africa. Part V. New and little known species with incomplete venation. Journal of Hymenoptera Research 22: 29–43. doi: 10.3897/jhr.22.871

Gess FW (2012a) The genus *Quartinia* Ed. Andre, 1884 (Hymenoptera, Vespidae, Masarinae) in Southern Africa. Part VI. New and little known species both with complete and incomplete venation. Journal of Hymenoptera Research 24: 95–115. doi: 10.3897/JHR.24.2155

Gess FW (2012b) A new species of *Masarina* Richards 1962 from southern Africa, description of the female of *M. ceres* Gess 1997 and supplementary data on three other species of the genus (Hymenoptera, Vespidae, Masarinae). Journal of Hymenoptera Research 25: 83–92. doi: 10.3897/JHR.25.2442

Kula RR (2011) Two new brachypterous species of *Heterospilus* Haliday (Hymenoptera, Braconidae, Doryctinae) from the Nearctic Region. Journal of Hymenoptera Research 21: 53–64. doi: 10.3897/JHR.21.875

Matsumoto R, Broad GR (2011) Discovery of *Rodrigama* Gauld in the Old World, with description of two new species (Hymenoptera, Ichneumonidae, Poemeniinae). Journal of Hymenoptera Research 20: 65–75. doi: 10.3897/jhr.29.872

Matushkina NA (2011) Sting microsculpture in the digger wasp *Bembix rostrata* (Hymenoptera, Crabronidae). Journal of Hymenoptera Research 21: 41–52. doi: 10.3897/JHR.21.873

Nalepa CA (2012) Wing wear is a poor estimate of age in *Cerceris fumipennis* (Hymenoptera, Crabronidae). Journal of Hymenoptera Research 24: 43–46. doi: 10.3897/jhr.24.2091

Penev L, Agosti D, Georgiev T, Catapano T, Miller J, Blagoderov V, Roberts D, Smith VS, Brake I, Ryrcroft S, Scott B, Johnson NF, Morris RA, Sautter G, Chavan V, Robertson T, Remsen D, Stoev P, Parr C, Knapp S, Kress WJ, Thompson FC, Erwin T (2010) Semantic tagging of and semantic enhancements to systematics papers: ZooKeys working examples. ZooKeys 50: 1–16. doi: 10.3897/zookeys.50.538

Penev L, Hagedorn G, Mietchen D, Georgiev T, Stoev P, Sautter G, Agosti D, Plank A, Balke M, Hendrich L, Erwin T (2011) Interlinking journal and wiki publications through joint citation: Working examples from ZooKeys and Plazi on Species-ID. ZooKeys 90: 1–12. doi: 10.3897/zookeys.90.1369

Pulawski WJ (2011) Two new synonyms in Oriental Crabronidae (Hymenoptera). Journal of Hymenoptera Research 20: 1–7. doi: 10.3897/jhr.29.869

Quicke DLJ, Marshall S (2011) Unusual host carrying by a parasitoid wasp (Braconidae, Braconinae, Pycnobraconoides). Journal of Hymenoptera Research 20: 77–79. doi: 10.3897/jhr.29.868

Sarzetti L, Genise J, Sanchez MV (2012) *Trichothurgus bolithophilus* sp. n. (Hymenoptera, Megachilidae) a bee nesting in horse manure pads in Patagonia, Argentina. Journal of Hymenoptera Research 29: 1–14. doi: 10.3897/jhr.29.3529

Seltmann KC, Yoder MY, Miko I, Forshage M, Bertone MA, Agosti D, Austin AD, Balhoff JP, Borowiec ML, Brady SG, Broad GR, Brothers DJ, Burks RA, Buffington ML, Campbell HM, Dew KJ, Ernst AF, Fernandez-Triana JL, Gates MW, Gibson GAP, Jennings JT, Johnson NF, Karlsson D, Kawada R, Krogmann L, Kula RR, Mullins PL, Ohl M, Rasmussen C, Ronquist F, Schulmeister S, Sharkey MJ, Talamas E, Tucker E, Vilhelmsen L, Ward PS, Wharton RA, Deans AR (2012) A hymenopterists' guide to the Hymenoptera Anatomy Ontology: utility, clarification, and future directions. Journal of Hymenoptera Research 27: 67–88. doi: 10.3897/jhr.27.2961

Shaw MR, Jennings MT, Quicke DLJ, and Pensoft Publishers (2011) Misleading morphology: 3 European parasitoid wasp ‚species' are seasonal forms of just 1. EurekAlert!, October 26, 2011. URL: http://www.eurekalert.org/pub_releases/2011-10/pp-mmt102611.php . Archived at http://www.webcitation.org/6E0O27iPA

Stoelb S, Sharkey MJ (2011) A revision of Thai Agathidinae (Hymenoptera, Braconidae), with descriptions of six new species. Journal of Hymenoptera Research 22: 69–132. doi: 10.3897/jhr.22.1299

Walker AK, Wharton RA (2011) A review of New World *Eurytenes* s. str. (Hymenoptera, Braconidae, Opiinae). Journal of Hymenoptera Research 20: 23–46. doi: 10.3897/jhr.29.877

Wcislo DO, Vargas G, Ihle KE, Wcislo WT (2012) Nest construction behavior by the orchid bee *Euglossa hyacinthina*. Journal of Hymenoptera Research 29: 15–20. doi: 10.3897/jhr.29.4067